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GEOGRAPHIC SCHOOL BULLETINS

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J. Baylor Roberts

GIRLS IN FLOWER PRINTS PRINT FLOWERS WITH THEIR NEEDLES

Except for the fact that these attractive seamstresses are sitting, shoeless, on a bamboo floor, this busy gathering might be a sewing circle anywhere in the United States instead of in the region of Manila Bay (Bulletin No. 3). These young Filipinas (the feminine of Filipinos) are decorating lengths of piña cloth with the delicate embroidery for which their islands are famous. The art came from Ireland, by way of France and Spain, whose nuns brought it to Manila's convents. The piña cloth comes from the fine fibers stripped from the leaves of the pineapple plant. It is hand-woven into crisp shiny fabric used for luncheon sets for the tourists and the festival costumes of the Filipinas. Nearly all the embroidery was done in the homes as piecework.

GEOGRAPHIC SCHOOL BULLETIN

HOW TEACHERS MAY OBTAIN THE BULLETINS

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Oder River Is Germany's Rhine of the East

THE Oder River, relied upon by the Nazis as a natural defense against the Soviet armies, is eastern Germany's counterpart of the Rhine.

More than 550 miles long, the Oder rises in the highlands of Soviet-severed Upper Silesia, and empties into the Baltic Sea at the Pomeranian port of Stettin. Berlin lies a little over 30 miles west of the river on its last big curve before reaching the sea.

Stettin Grew Despite Air Attacks

Like the Rhine in the west, the Oder flows in its winding course through some of Germany's richest industrial, mining, and farming areas. It also has been a vital transport link between areas producing such war essentials as armaments, chemicals, machines, fuel, and food supplies. Important manufacturing and traffic centers on the river are Oppeln, Brieg, Breslau, Glogau, Frankfurt, Küstrin, and Schwedt.

Although most of these cities have been bombed, Stettin seaport (illustration, next page) has suffered the heaviest raids, beginning early in the war with R.A.F. attacks on harbor works, oil plants, and shipbuilding yards. Population, nevertheless, has been recently reported at 375,000, far in excess of the prewar figure. Besides its war factories, Stettin has some of Germany's largest shipyards, including those for U-boat construction. As Berlin's port, it was the chief supply base for the Germans during their push into Soviet Russia.

The leading inland city along the Oder is Breslau, situated in the heart of Silesia, where the southeast corner of Germany is narrowed between the borders of Poland and Czechoslovakia. With more than 600,000 inhabitants, it was rated the main industrial center of eastern Germany. When the heaviest attacks were coming from the west, and with Berlin repeatedly hit by devastating bomber raids, there were several reports that offices of the Nazi government had been moved from Berlin to Breslau. Thousands of civilians who were moved from much-bombed western German cities to "safe" areas around the Oder found themselves engulfed in the current Soviet drive.

Oder Plains Provide Poorer Defenses than Rhine Country

Once out of the forested hill-and-mountain region of its origin, the Oder flows through the Silesian plains into the broad, flat country of the German north. For most of its course, the river's banks are low, with only occasional hills and wooded stretches to the east providing natural defense positions—unlike the Rhineland which has a comparatively rough terrain.

When not frozen over in winter, the Oder is navigable from Stettin all the way up to the German town of Ratibor, in the Silesian uplands, where Polish, Czech, and German boundaries come together. At one time, when the Germans were on the offensive, they were rushing construction of a canal between the Oder and the Morava that would offer a direct route from Silesia to the Danube Valley.

On its way through Germany, the Oder has been considerably canalized. Stettin, about 75 airline miles northeast of Berlin, is linked with the capital by canal, as well as by rails and highways.

A complex network of railroads and highways covers the region drained by the Oder. These lines not only follow the river valley but converge on the stream

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THE PHILIPPINES, LIKE A DISMEMBERED OCTOPUS, FLING 7,000 ISLANDS ACROSS THE WEST PACIFIC

Manila Bay, a deep indentation on the southwest shore of the "head" island of Luzon, provides Manila with one of the naturally best-protected harbors in the Orient. Bataan peninsula closes off most of it from the open sea. The narrow remaining strait is corked by Corregidor and other island forts too small to show on this small-scale map. The south-reaching disjointed "tentacle islands," as well as the rest of the archipelago, are about evenly divided between United States and Filipino forces on the one hand and die-hard Jap garrisons on the other. (Bulletin No. 3.)

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Jackson Hole, Wyoming: a Bit of the Old West

"HOWDY, stranger. Yonder is Jackson Hole."

Thus proclaims a sign at a highway entrance to the spectacularly scenic natural basin in northwest Wyoming where the West still lives and fights for what it considers its own. President Roosevelt, who established the Jackson Hole National Monument in 1943, recently resorted to his power of the pocket veto to block temporarily an attempt by ranchers of the region to have the Federal area abolished.

Jackson Hole National Monument includes much of the mountain-locked valley at the foot of the Grand Teton Range. This valley, or "hole" in frontier parlance, is noted for two types of ranches—cattle and dude. The former stretch for miles and graze thousands of head of stock; the latter entice vacationing Easterners who seek a breath of the West. The valley profited by both.

National Monuments Are Not on Street Corners

Perhaps harking back to the fighting days of 1890 and 1900 when sheep herders edged into the territory of Jackson Hole cattlemen, the ranchers immediately "took up arms" against the presidential proclamation that made their land a National Monument. A bill for the abolition of the monument actually passed Congress and would have immediately become law if the President had signed it.

A National Monument is similar in some respects to a National Park. Some are larger than National Parks, and contain historic, archeologic, or other educational features as well as scenery. National Parks are set aside solely for their scenic and recreational value. They can be created only by act of Congress, whereas National Monuments can be established by presidential proclamation under the authority of the American Antiquities Act of 1906.

The new National Monument lies only a few miles south of Yellowstone National Park, and adjoins the Grand Teton National Park. The plains section of eastern Wyoming is described as the place "where you can look farther and see less" than in any other part of the world. The negative pride of this typically Western remark does not apply to the west half of the State, where "landscape is set on edge," and the Grand Tetons tower 7,000 feet above the floor of Jackson Hole—one of the greatest and most abrupt elevation changes in the United States (illustration, next page).

John Colter, discoverer of the marvels of Yellowstone, probably was the first white man in Jackson Hole, appearing in 1807. Shortly afterward, other trappers began to filter through the area, among them Jim Bridger and Kit Carson. David E. Jackson, part owner of a fur company which systematically trapped the region in the 1820's, gave his name to the lake-spotted, game-rich basin.

National Geographic Society Life Trustee Studied Area

Not until 1883, only 62 years ago, did the first permanent settlers reach Jackson Hole. This natural range of elk and moose became the grazing grounds of cattle. The Jackson Hole elk herd, amounting to 20,000 head, nearly perished in the severe winter of 1908-09. Residents of the valley, and the State Legislature, purchased feed for the starving herd, but requested Federal help in preventing subsequent famines. Congress set aside 1,000 acres as a winter refuge, greatly enlarged in later years.

Even before this refuge was established, President Grover Cleveland, by proc-

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at a number of points. Meeting at Breslau, rails and roads form a giant spider-web of communications. Frankfurt, downstream, is another traffic center on the river. Through it runs the trunk line between Berlin, Polish Poznań, and Warsaw (Warszawa). Roughly paralleling the Oder is also one of Germany's superhighways. It links the Nazi capital with important Silesian cities.

Note: The Oder River may be traced on the National Geographic Society's Map of Germany and Its Approaches, which appeared as a supplement to the *National Geographic Magazine* for July, 1944. A price list of maps may be obtained from the headquarters of the Society, Washington 6, D. C.

For further information on the region over which the Soviet forces have been fighting toward Berlin, see "Prewar Danzig's Free-City Status Was Unique," and "Upper Silesia Was Germany's Eastern Ruhr" (Geo-Graphic Brevity), in the GEOGRAPHIC SCHOOL BULLETINS, February 12, 1945; and "East Prussia Was Germany's Stronghold of Junker Militarism," November 13, 1944.

Bulletin No. 1, February 26, 1945.

THE HARBOR OF STETTIN CLOGS THE MOUTH OF THE ODER

Though Stettin lies 35 miles from the Baltic Sea, its harbor is in effect the end of eastern Germany's 550-mile-long Oder River, here seen winding cameraward across the upper portion of the picture. Between this harbor and the open sea, ships go through a corner of the Dammscher See, thread the narrow Papen Wasser, and cross the nearly landlocked Stettiner Haff. Though ice-bound in winter, Stettin, as Berlin's Baltic port, handled a large prewar trade. It had a great shipbuilding industry. The main part of the city lies to the right, connected by bridges to the harbor area. Many flat canal boats reveal the importance of inland water transport to Stettin. A first-class canal connects Stettin and Berlin, via the Oder.

SAVE WASTE PAPER

Paper is essential to victory. Save every scrap of it. Your local salvage committee will tell you how your waste paper can help the war effort.

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Manila Bay Becomes Stage for New Chapter of U. S. History

MANILA Bay is again in the headlines, in radio newscasts, and American talk. This indentation on the southwest coast of Luzon became an American household word in May, 1898, on the news of Admiral Dewey's victory over Spain. Forty-four years later, on May 6, 1942, the surrender of Corregidor, rocky island fortress at the entrance to the bay, marked the passing of Manila—bay and city—to Japanese control. Now, after nearly three years of Japanese occupation, climaxed by the retreating enemy's recent destruction of much of the city, the United States flag again flies over the capital of the Philippines.

During the 43 years of United States stewardship Manila became a city of 673,000 people and a busy hub for America's western Pacific trade. In 1945, as in 1898 and 1942, it became the focal point for a major test between warring nations.

Manila an Echo of Old Spain

Manila Bay (map, inside cover) is a sheltered and comparatively shallow fan-shaped gulf about 110 miles in circumference. In area it roughly matches Delaware Bay plus the estuary of the Delaware River south from Wilmington. Its outlet to the South China Sea, in the southwest corner, continues the likeness in its 12-mile width—equal to that of Delaware Bay's mouth between Cape May and Cape Henlopen.

Manila Bay is deepest at the entrance, its bottom sloping up from 220 feet in the main channel to tidal sand flats along most of the coast.

When the Spaniard Miguel Lopez de Legaspi sailed into the bay in 1571, he found a native village on the south bank of the Pasig River. Fort Santiago and the Walled City (Intramuros) which grew there are the historic heart of modern Manila, important right down through 1941 as the headquarters of General MacArthur and station of the 31st U. S. Infantry—"Manila's Own." Streets and buildings of the Walled City reflect the architecture of old Spain.

Between the Walled City and the bay, on reclaimed land, lies the modern port section. A boulevard, warehouses, and piers for ocean-going boats line the waterfront. Long moles protect a big anchorage. Interisland steamers up to 18-foot draft dock at wharves along the first mile of the Pasig River. Launches and small boats can pass up the winding Pasig, past four bridges (blown up by the Japs), for 15 miles to Laguna de Bay, a fresh-water lake almost as large as Manila Bay.

Defenses Included Outlying Airfields

Jones Bridge, nearest to the bay of the four spans, carried traffic from the edge of the Walled City to the Escolta, commercial heart of Manila. North of the Escolta is the Tondo, area of densest population. Eastward on this north side of the river are the old Bilibid Prison and Santo Tomás University (oldest under the American flag), from which thousands of Americans were liberated; San Lazaro Hospital; and the Malacañan Palace, the Filipino "White House" (illustration, next page).

Spreading southeast from the port district, partly on made ground, are the Manila Hotel, various clubs and recreation grounds, the City Hall and Legislative Building, the University of the Philippines, and the Philippine General Hospital.

The defenses of Manila in 1941 included the fleet of Army planes based at Nichols Field, south of the city; Nielson and Grace Park airfields; and Zablan and Marikina airports a few miles northeast. Navy planes were ready to spring into action from Cavite, headquarters of the U. S. 16th Naval District.

Ten miles southwest across the bay from Manila, 22 miles by the palm-fringed shore drive, the Cavite Naval Station occupies the narrow peninsula forming little Bacoor Bay. Repair shops, a hospital, Marine barracks, and quarters for a big Asiatic fleet were part of the Cavite installations. East of the Naval Station and Nichols Field was Fort William McKinley.

Military and naval defenses guarding the entrance to Manila Bay extended 60 miles along the South China Sea coast. Olongapo, 35 miles north of the entrance, on Subic Bay, is the site of a Naval base with repair yards and drydocks for big ships. Mariveles, on the southern tip of Bataan, had a well-equipped natural harbor. There were airfields at Mariveles, on Corregidor, and at Nasugbu and Calatagan on the west coast of Luzon, south of Limit Point.

Historic Corregidor, 2½ miles off the tip of Bataan in the entrance to the bay, is a three-mile-long "tadpole," headed for the open sea. Site of Fort Mills, the island is honey-combed

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lamation, had created the Teton Forest Reserve including most of the Teton Range and Jackson Hole region. The limits of the Reserve were extended by President Theodore Roosevelt in 1902.

Two years later the naturalist, George Shiras, 3d, who before his death was a life trustee of the National Geographic Society, went to Wyoming as a member of a Congressional Committee on Public Lands. He studied the advisability of enlarging Yellowstone Park to include Jackson Hole and the Tetons.

Mr. Shiras' report advocated the enlargement of the park in order to preserve a region of singular grandeur for the American public, and to increase both the summer and winter ranges for moose, bear, and other big-game animals. Wyoming legislators opposed the project as too great a Federal withdrawal of public lands for park purposes.

Early in 1929 Congress established the 150-square-mile Grand Teton National Park. John D. Rockefeller, Jr., began three years earlier to buy private land in Jackson Hole. He assembled over 55 square miles of the valley floor for the purpose of turning it over to the government.

Jackson, only sizable town in the valley, remains a western-movie-location town, with high, wooden false fronts on buildings and hitching posts along Main Street. Both men and women often wear cowboy regalia.

Note: Jackson Hole is shown on the Society's Map of the Northwestern United States.

Bulletin No. 2, February 26, 1945.

U. S. Army Air Service

CLOUD-PIERCING TETONS TOWER ABOVE THE JACKSON HOLE TWIN LAKES

The President, in defense of his proclamation making this valley (foreground) a National Monument, said that Jackson Hole, ". . . formed by block-faulting and glacial action, has as significant a story to tell of these great forces as has the Grand Canyon to reveal of erosive processes. . . . For many years it was a celebrated rendezvous of trappers and Indians; very few areas of the West preserve as many frontier associations. . . . It provides the necessary foreground for the great mountain peaks in the adjoining Grand Teton National Park . . ."

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Calcium Gives Strength to Men and Machines

ADD calcium to the list of little-known metals serving the war effort. Health programs have made calcium known to United States school children as a builder of teeth, bones, and stronger bodies. Today war is teaching them that this versatile substance also gives increased strength and safety to fleets of American airplanes ranging enemy skies.

One of the Most Abundant and Elusive of Metals

Calcium is the "scavenger" metal which, added to a melting pot, ferrets out and destroys impurities. Thus, to make steel strong and pure for certain uses in aircraft production, calcium is put into a batch of molten steel ingredients. It eliminates or neutralizes impurities. "Calcium steel" will not break under the terrific strain of battle; it is the kind of material that enables flak-riddled B-29's to return to home bases.

Calcium ranks fifth among elements in abundance. Silvery-white, it does not occur alone, but is combined with other elements in such substances as gypsum, limestone, and chalk (illustration, next page). One of the most difficult tasks which early confronted researchers was to perfect methods for extracting pure calcium from its basic ores.

Before the war the United States imported nearly all its industrial calcium from France and Germany. Now one plant, in Sault Ste. Marie, Michigan, produces several times the amount imported in any one year. Over three per cent of the earth's solid shell is calcium. It is found even in the sun.

Large Supplies Found in Mineral, Vegetable, Animal Worlds

The word calcium, derived from the Latin *calx*, means lime. Calcium is the most abundant metallic element in the human body. It reaches the system as minute particles in the water we drink, the food we eat, and the air we breathe.

Many springs are noted for the high calcium content of their waters. All fresh water contains more of the element than does salt water, for in the latter it is constantly being absorbed by seaweeds and by millions of salt-water animals. From sea food some of this calcium is transmitted to man. However, it is estimated that about 1,400,000,000 tons of calcium annually settle on sea bottoms in the bones and shells of dead sea animals.

In the plant world the calcium "intake" of fruits and vegetables depends upon the locality in which they are grown. In sections of the country where both the soil and water are rich in calcium, the inhabitants are apparently freer from tooth decay and other physical ailments than in regions not so well supplied with the mineral.

Man Consumes 30 Pounds of Calcium in Lifetime

Calcium is as necessary in the rations of farm animals as it is in the diet of humans. Through meat and dairy products considerable calcium is passed on to man. Milk is particularly rich in calcium and is one of the most accessible sources of that mineral. Cheese, made from milk, provides one of the highest percentages of calcium of any of man's foods.

The Army has long recognized the necessity of a calcium-rich diet. Field rations, which the soldier carries into battle, contain powdered milk, cheese, bis-

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with man-made tunnels and big underground chambers like Gibraltar. Guns, ammunition, food, water, soldiers' quarters, hospitals, and kitchens made it a humming defense and harbor control station. Before the outbreak of war 8,000 people lived on Corregidor. Many refugees from Manila endured the island's four-month siege of early 1942.

Small Islands Help Corregidor Guard the Channel

Spain first fortified the big rock to guard Manila. Admiral Dewey's fleet slipped by it at night, destroying the Spanish ships in the waters off Cavite. It was ignored by the Japs in the 26 days that brought them from Lingayen Gulf landings into open Manila—a procedure duplicated by MacArthur's forces in the reconquest. But Manila is of little commercial use without control of Manila Bay and its entrance; once again Corregidor became the site for a last-ditch stand.

Corregidor stands between two channels leading from Manila Bay to the South China Sea. Strung along the south (and main) channel are three small islands, well fortified in 1941. They are Caballo, site of Fort Hughes; Fraile, site of Fort Drum; and Carabao, site of Fort Frank. Considered capable of stopping the most formidable attack by surface ships, these four channel guardians yielded in 1942 after months of persistent Jap attack by air, land, and sea.

Note: Manila Bay is shown in a large-scale inset on the Society's Map of the Philippines, issued as a supplement to the *National Geographic Magazine* for March, 1945. This issue contains the article, "What Luzon Means to Uncle Sam."

See also, "Facts about the Philippines," in the *National Geographic Magazine* for October, 1942*; and "Return to Manila," October, 1940*; and in the GEOGRAPHIC SCHOOL BULLETINS, December 4, 1944, "Luzon, Head Island of the Philippines"; and "New War Chapter Opens in the Philippines," November 6, 1944. *(Issues marked with an asterisk are included in a list of Magazines available to teachers in packets of ten for $1.00.)*

Bulletin No. 3, February 26, 1945.

M. Bantola

FROM THE SPANIARDS THROUGH THE AMERICANS TO THE FILIPINOS DESCENDS THE MALACAÑAN, "HOME OF THE GREAT"

In beautiful gardens along the Pasig River, shaded by towering broad-branched trees, Manila's "White House," Malacañan Palace, spreads galleried wings. More than a century ago the Spaniards bought the mansion as a country home for their governors, who lived in a big stone house in the Walled City. In 1865 an earthquake destroyed the town house and since that time Spanish rulers, United States Governors General, and finally a Filipino President, have made their home in the Malacañan—which, in Tagalog, means "Home of the Great."

strengthening these metals, just as the calcium in food strengthens children's bodies.

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Jordan River Project Would T.V.A.-ize Bible Lands

AFTER the war, the Jordan may become a river of work as well as a holy stream of hymns and baptisms. A plan for a "Jordan Valley Authority" would change the river and its uses as much as the Tennessee Valley Authority changed the Tennessee.

The new irrigation and power project for the entire Jordan valley has been proposed in the United States under the sponsorship of Zionist leaders and Department of Agriculture reclamation experts. Dams would be built and the stored water spread over thirsty fields. A related project would link the Mediterranean Sea to the Dead Sea by a 95-mile canal which would produce electric power.

Jordan Begins 260 Feet above Sea Level, Drops 1,546 Feet

Ancients gave the name "river that goes down" to the Jordan, a stream with an incredibly steep descent. It twists through the deep valley between Palestine and the Arab state of Trans-Jordan. Barren rocky hills border the valley, edging lands steeped in Bible lore—Galilee, Israel, and Judaea on the west; Gilead and Ammon on the east.

Beginning in the highlands of Lebanon, the river in its course of 130 air miles to the Dead Sea meanders more than 260 miles, its level dropping steadily, mile upon mile. Lake Hule (illustration, next page), a basin in the river's upper course, is 230 feet above sea level. Ten miles farther south the river enters the blue waters of the Sea of Galilee—a fresh-water lake 696 feet below sea level. From the Sea of Galilee the Jordan bustles and loafs down its winding staircase to the Dead Sea, 1,286 feet below the level of the Mediterranean.

South of the Sea of Galilee the Jordan is normally from 90 to 100 feet wide. In places in its upper reaches it is channeled by steep, rocky walls. In these narrows the river is swift and sometimes 10 feet deep.

The upper river is studded with boulders, and ruffled with rapids. As the river nears the Dead Sea it becomes placid and muddy. Between its two seas the Jordan receives the waters of several streams—from the west the Nahr Jalud, the Fari'a, and the Wadi el Qelt; from the east the Yarmuk, the Jabbok, the Wadi Nimrin, and several other wadis. A power plant has been built on the east bank of the Jordan just below the Yarmuk junction. In winter the Yarmuk turns the turbines; in summer water from a reservoir fed by the two rivers is used.

Nature's Inland Brine Vat

Sudden storms rage over the valley of the Jordan. The sun shines with burning intensity on the deep pocket of the Dead Sea, heating and expanding the air which fills it. As the sun's power wanes toward nightfall, the cooler, heavier air from the bordering mountains rushes down to restore the atmospheric balance. This mighty downdraft sweeps through the valley with squall-like fury. Sturdy trees bend before it; the Sea of Galilee is lashed to whitecapped turmoil.

Sunshine is the rule of the region; all except a few winter days are bright. Little rain falls in the valley from May to November. Heavy dews have long been the salvation of summer crops and fruits. The river is fed by the snows of northerly Mount Hermon and other Lebanon peaks.

Jordan water is warm, and tastes flat. Allowed to settle and cool in camel-hide bags it becomes palatable. Galilee water is clear; Dead Sea water is five

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cuits, and caramels—all contributing calcium.

It has been estimated that the teeth, bones, and tissues of a full-grown man contain less than five pounds of calcium. During his lifetime, he will probably consume 30 to 35 pounds of calcium. Although the amount may seem small, it is extremely important. In addition to its strength-giving properties, it helps coagulate the blood and assists in the proper functioning of nerves and muscles.

Note: See also, "Metal Sinews of Strength," in the *National Geographic Magazine* for April, 1942; and "Revolution in Eating," March, 1942; and "The ABC's of Vitamins for Victory" in the GEOGRAPHIC SCHOOL BULLETINS, May 4, 1942.

Bulletin No. 4, February 26, 1945.

Maynard Owen Williams

THE WHITE CLIFFS OF DOVER, THOUGH ONLY CHALK, CONTAIN CALCIUM

Pure calcium is one of the world's most versatile substances. Kent, the region of the Dover cliffs—along with other parts of England—quarried nearly 5,000,000 tons of chalk annually. It went into the making of writing chalk for blackboards, mortar, cement, quicklime, plaster, and fertilizer. Three other sources of calcium appear in this picture: the sea, the seaweed clinging to the foot of the cliff, and the vegetation. Pure calcium, when separated from other elements with which it is always found in combination, becomes a scavenger metal, used as a purifier in making steels, secondary aluminum, and magnesium castings. It has the effect of strengthening these metals, just as the calcium in food strengthens children's bodies.

times as salty as ocean water. Nearly 1,300 feet below sea level, the Dead Sea's waters extend another 1,300 feet into the earth.

Most of the villages, modern and Biblical, of the Jordan are situated near the Sea of Galilee—Samakh, a collection of Arab huts; Deganya, a Jewish colony of the Zionist movement, where agriculture has been revived to approximate the richness of Bible days; Tiberias, seat of ancient Roman power; Capernaum, the home of the Disciple Peter; and Bethsaida, near where Jesus fed the multitude with five loaves and two fishes.

Reedy thickets line the banks. Clumps of tamarisks, willows, and poplars are common; there are planted groves of eucalyptus and clusters of oleander. The Christ's thorn abounds around the Sea of Galilee. Fields of kaffir corn and vegetables pattern the countryside.

Canoeists have navigated the Jordan by resorting to portages. In 1848 a United States Navy expedition descended the Jordan from the Sea of Galilee to the Dead Sea in eight days.

Note: The Jordan River is shown on the Society's Map of Europe and the Near East.

For additional information, see "The Geography of the Jordan," in the December, 1944, issue of the *National Geographic Magazine*; "Canoeing down the River Jordan," December, 1940; and "Change Comes to Bible Lands," December, 1938*.

Bulletin No. 5, February 26, 1945.

Alice Schalek

A MODERNIZED PALESTINE MAY SUPPLANT THIS PASTORAL ECONOMY

These shepherds, living near Lake Hule in the upper reaches of the Jordan River, are cleaning wool. Their homes are made of reeds woven into mats. The reeds grow in the swamps of Ard el Hule, just north of the lake. In Bible times the Holy Land was a rich agricultural country, with elaborate irrigation and terrace systems controlling the scarce waters. In the 7th century, when the Arabs overran the country and allowed their herds of sheep to graze where they would, a general decline set in. A proposed postwar plan to use Jordan waters for irrigation would bring back to Palestine the fertility of Bible days.

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